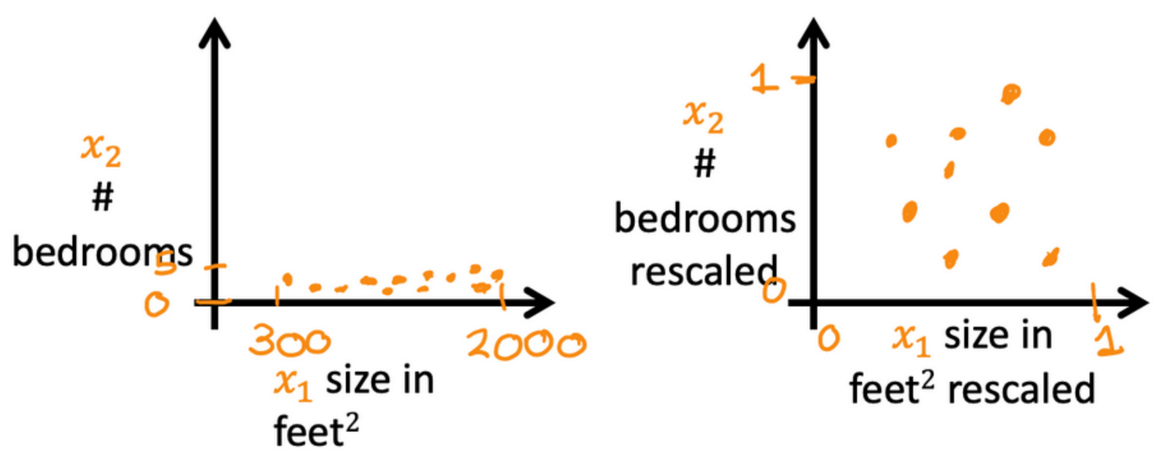
## Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 70%. We keep your highest score.

Next item →



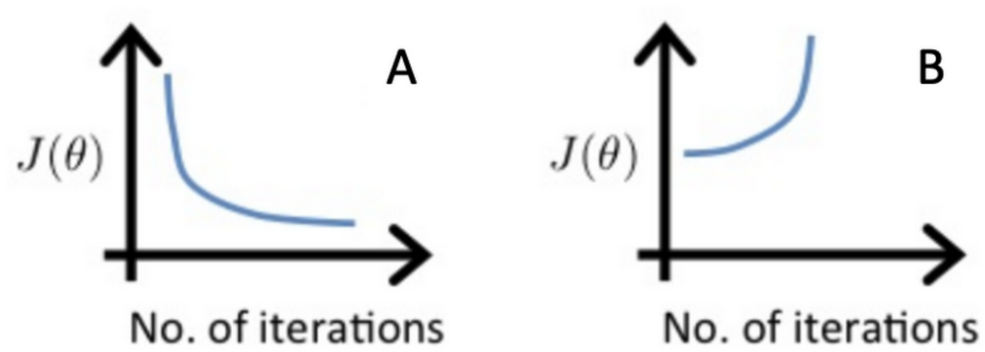

1 / 1 point

**1.** Which of the following is a valid step used during feature scaling?

- (●) Subtract the mean (average) from each value and then divide by the (max - min).
- ( ) Add the mean (average) from each value and and then divide by the (max - min).

**Correct**
This is called mean normalization.

**2.** Suppose a friend ran gradient descent three separate times with three choices of the learning rate $\alpha$ and plotted the learning curves for each (cost J for each iteration). 1 / 1 point




For which case, A or B, was the learning rate $\alpha$ likely too large?

- ( ) Neither Case A nor B
- ( ) Both Cases A and B
- ( ) case A only
- (●) case B only

**Correct**
The cost is increasing as training continues, which likely indicates that the learning rate alpha is too large.

**3.** Of the circumstances below, for which one is feature scaling particularly helpful? 1 / 1 point

- ( ) Feature scaling is helpful when all the features in the original data (before scaling is applied) range from 0 to 1.
- (●) Feature scaling is helpful when one feature is much larger (or smaller) than another feature.

**Correct**
For example, the “house size” in square feet may be as high as 2,000, which is much larger than the feature “number of bedrooms” having a value between 1 and 5 for most houses in the modern era.

1 / 1 point

**4.** You are helping a grocery store predict its revenue, and have data on its items sold per week, and price per item. What could be a useful engineered feature?

- ( ) For each product, calculate the number of items sold divided by the price per item.
- (●) For each product, calculate the number of items sold times price per item.

**Correct**
This feature can be interpreted as the revenue generated for each product.

**5.** True/False? With polynomial regression, the predicted values f_w,b(x) does not necessarily have to be a straight line (or linear) function of the input feature x. 1 / 1 point

- ( ) False
- (●) True

**Correct**
A polynomial function can be non-linear. This can potentially help the model to fit the training data better.